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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/651,976	08/31/2000	Yaqi Chen	TI-28222	3070

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EXAMINER	
WILLIAMS, LAWRENCE B	
ART UNIT	**PAPER NUMBER**
2634	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/651,976	CHEN ET AL.	
	Examiner	Art Unit	
	Lawrence B. Williams	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *amendment filed on 23 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

2. The indicated allowability of claims 21-30 is withdrawn in view of newly discovered reference(s). Rejections based on the newly cited reference(s) follow.

Claim Objections

3. Claim 5 is objected to because of the following informalities: Examiner suggests applicant replace the word "initiating" with "initiates" in line 2 of the claim.

4. Claim 14 is objected to because of the following informalities: Examiner suggests applicant rewrite the claim for clarification.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 8-13, 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Davis (US Patent 6,498,806 B1).

(1) With regard to claim 1, Davis discloses in Fig. 6, a communication network, comprising: a network node (central office line); a first terminal (216) having a first modem connected to said network node via a master communication loop (line to central office); and a second terminal (216) having a second modem also connected to said network node via said master communication loop, wherein the first and second terminals are adapted to communicate with the network node and each other with signals compatible with ADSL standards (col. 6, lines 31-56).

(2) With regard to claim 2, Davis also discloses in Fig. 6, wherein the first terminal (216) and second terminal (216) are locally proximate one another.

(3) With regard to claim 3, Davis also discloses wherein the master communication loop comprises a twisted pair of conductors (col. 5, lines 9-29).

(4) With regard to claim 4, Davis also discloses wherein the network node is adapted to permit and enable the first terminal to communicate with the second terminal via the network node (col. 6, lines 31-56).

(5) With regard to claim 8, claim 8 inherits all limitations of claim 1 above. Furthermore, Davis also discloses wherein each said first and said second are adapted to communicate over said common master communication loop using a technique selected from the group consisting of: time division, frequency division and code division (col. 14, lines 10-20).

(6) With regard to claim 9, claim 9 inherits all limitations of claim 2 above. Furthermore, Davis discloses in Fig. 6, wherein the network node is a central office (CO) located remote from both the first and second terminal.

(7) With regard to claim 10, claim 10 inherits all limitations of claim 1 above. Furthermore, Davis also discloses in Fig. 3, wherein the first terminal is a personal computer.

(8) With regard to claim 11, claim 11 inherits all limitations of claim 1 above.

(9) With regard to claim 12, claim 12 inherits all limitations of claim 11 above. Furthermore, Davis also discloses wherein the first and second terminals are adapted to be co-located, said modem adapted to facilitate communications between said terminal over said common master loop (col. 5, lines 9-29). Communication between remote computers facilitated (help bring about) through the CO over a master loop is well known in the art; i.e. instant messenger application.

(10) With regard to claim 13, claim 13 inherits all limitations of claim 12 above. Furthermore, Davis also discloses wherein the master loop comprises a twisted pair of conductors (col. 5, lines 9-29).

(11) With regard to claim 17, claim 17 inherits all limitations of claims 1 and 12 above.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 7 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Davis (US Patent 6,498,806 B1) as applied to claims 1 and 12 above.

With regard to claim 7, Davis discloses all limitations of claim 1 above. Though Davis does not explicitly teach the first and second terminal are adapted to simultaneously communicate over a common communication loop with the network node, examiner asserts that such a communication is well known in the art. At any given moment, at least thousands of ASDL terminals are in simultaneous contact with the central office.

9. Claims 5, 6, 14-16, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis. (US 6,498,806 B1) as applied to claims 4, 12, 17 above, and further in view of Miao et al. (US Patent 6,279,022 B1).

(1) With regard to claim 5, as noted above, Davis discloses all limitations of claim 12. He does not however, disclose wherein the modem establishes first terminal imitating a communication as a master maintaining a superframe. Davis discloses initiating communication with a frame. It is well-known in the art that ADSL uses a superframe. However, Maio et al. teaches imitating a communication as a master maintaining a superframe (col. 1, lines 39-60).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to apply the method as taught by Maio et al. to modify the invention of Steele et al. as a known method of synchronization between the modems for correct detection of received symbol boundaries.

(2) With regard to claim 6, Maio et al. also discloses wherein the network node directs the first terminal to maintain the superframe (col. 1, lines 39-60).

(3) With regard to claim 14, claim 14 inherits all limitations of claims 5 and 12 above.

(4) With regard to claim 15, Davis discloses all limitations of claim 12 above. Though Davis does not explicitly teach the first and second terminal are adapted to simultaneously communicate over a common communication loop with the network node, examiner asserts that such a communication is well known in the art. At any given moment, at least thousands of ASDL terminals are in simultaneous contact with the central office.

(5) With regard to claim 16, claim 16 inherits all limitations of claim 15 above. Furthermore, Davis also discloses wherein the modem facilitates the simultaneous communication using a technique selected from the group consisting of time division, frame division, and code division.

(6) With regard to claim 18, claim 18 inherits all limitations of claims 16 and 17 above.

(7) With regard to claim 19, claim 19 inherits all limitations of claims 13 and 17 above.

(8) With regard to claim 20, claim 20 inherits all limitations of claims 15 and 17 above.

10. Claims 21-23, 25-29 are rejected under 35 U.S.C. 103(a) as being unpàtentable over Davis (US Patent 6,498,806 B1) in view of Wiese et al. (US Patent 6,434,119 B1).

(1) With regard to claim 21, Davis discloses in Fig. 6, a communication network, comprising: a network node (central office line); and a plurality of modems connected to the network node by a common master loop (line to central office); the method comprising; directing a first modem to release a potion of communication bandwidth used by the first modem; using

the portion of communication bandwidth released by the first modem for the second modem to establish simultaneous communication over the common master loop between the network node and the first and second modems (col. 13, line 49- col. 14, line 29). Davis does not however teach initiating communications between a first modem and the network node; initiating communication between a second modem and the network node.

However, Wiese et al. teaches initiating communications between a first modem and the network node; initiating communication between a second modem and a network node (claim 7; col. 12, lines 58- col. 13, line 11).

Therefore it would be obvious to one skilled in the art at the time of invention to incorporate the teachings of Wiese et al. with the invention of Davis as a known initialization scheme for multicarrier communication (col. 2, lines 49-55).

(2) With regard to claim 22, Wiese et al. also discloses wherein the first modem is configured to communicate with the network node as a master terminal while maintaining a superframe of the communication bandwidth (col. 6, line 28-col. 7, line 21; col. 12, line 58- col. 13, line 11).

(3) With regard to claim 23, Davis et al. also discloses wherein, the first and second modems are configured to communicate with the network node using time division multiplexing; and the first modem releases one or more time frames for the second modem to communicate in the network (col. 13, line 49-col. 14, line 28).

(4) With regard to claim 25, Though Davis nor Wiese et al. explicitly teach the first and second terminal are adapted to simultaneously communicate over a common communication loop with the network node, examiner asserts that such a communication is well known in the

art. At any given moment, at least thousands of ASDL terminals are in simultaneous contact with the central office.

(5) With regard to claim 26, Davis also discloses in Fig. 6, wherein the first and second modems are configured to communicate in the network using signals compatible with ADSL standards.

(6) With regard to claim 27, claim 27 inherits all limitations of claim 21 above. Furthermore, Davis also discloses wherein the master loop comprises a twisted pair of conductors (col. 5, lines 9-29).

(7) With regard to claim 28, claim 28 inherits all limitations of claims 21 above.

(8) With regard to claim 29, claim 29 inherits all limitations of claims 28 and 23 above.

11. Claims 24, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (US Patent 6,498,806 B1) in combination with Wiese et al. (US Patent 6,434,119 B1) as applied to claims 22, 28 above, and further in view of Cioffi et al. (US Patent 6,473,438 B1).

(1) With regard to claim 24, as noted above, Davis in combination with Wiese et al. disclose all limitations of claim 22 above. They do not however disclose the first modem releases one or more frequency tones for the second modem to communicate in the network.

However, Cioffi et al. discloses first modem releases one or more frequency tones for the second modem to communicate in the network (col. 13, lines 29-46).

It would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Cioffi et al. with the invention of Davis as a method of coordinating multi-point to point communication in a data transmission system (col. 2, lines 47-63).

(2) With regard to claim 30, claim 30 inherits all limitations of claim 24 and 28 above.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.) Foley discloses in US 2001/0012319 A1 Virtual Gateway System And Method.

b.) Dobson discloses in US 6,704,317 B1 Multi-Carrier Lan Modem Server.

c.) Cioffi discloses in US Patent 5,933,454 Multi-Carrier Data Transmission System Using An Overhead Bus For Synchronizing Multiple Remote Units.

d.) Hwang discloses in US Patent 6,501,791 B1 Method And Apparatus For Allocating Tones To A Plurality Of Users In A Multi-Tone Modem Communication System.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 703-305-6969. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams

lbw
May 27, 2005

STEPHEN CHIN
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